

Work Order ID 78412

78412

Page 1

January-09-12 9:00:06 AM

Item ID: D350-636-012

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube RH

Start Date: 09/01/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: M.L.J

Date: 12/01/09

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								

100

100

DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy blue file and type labels per PPP D350-636-012 CHG 006

0.00

0.00

S.26203

Handwritten signature and date: 12-2-3

B78412

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 78412

78412

Page 2

January-09-12 9:00:06 AM

Item ID: D350-636-012 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Skidtube RH
 Start Date: 09/01/2012 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 23/01/2012 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Skidtubes	0.00							
110		0.00							
Skidtubes	Memo								
Skidtubes	1- Pick D2600-3 Bent								
	2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750								
	3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.								
	4- Locate DT8329 off of blade fitting bolt holes and drill pilot holes for blade fitting								
	5- Drill only two fwd step holes using DT9616. Ensure proper positioning.								
	6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-2 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail K)								
	7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. ***SECOND SIDE***								
	8-Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail L to 0.500" (8 holes per side)								
	9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".								
	10-Open up holes of Detail A to 0.297" (total of 2 holes per side)								

JW 12-1-9
 12/01/16

W/O:		WORK ORDER CHANGES					
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Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left
from bending as per QSI 004
A/R Aluminum Rod batch: M119712 BE 12-01-16

12-Grind welds flush as per Dwg D2750

SAD 12-01-19

120

QC10- Inspect visual per QSI004- ground welds

0.00

120

QC

Memo

0.00

Quality Control

130

QC5- Inspect part completeness to step on W/O

0.00

130

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
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Page 4

Quality Control

① \neq CF/MO 12-1-20

1 ~~0~~ BE 12-01-20

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Page 5

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--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

0.00

160

Skidtubes

0.00

Skidtubes

Memo

1-Open up holes of Detail L and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.

2-Open up holes of Detail K to 0.750" (total of 4 holes per side) as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail K, L, ground handling and float holes per dwg D2750 (welding instructions on sheet 9)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per QSI 015

A/R Sikaflex-291

batch: 119558

exp. date: 12/08/13

DC 12/01/20

8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 9)

A/R Aluminum Rod

batch: M119712

BE12-01-23

9- At section AP-AP drill out x-bolt spacer to 0.404"

BE12-01-23

10-Grind welds flush as per Dwg D2750

11-Spot face ground handling holes section (total of 4 places per side) as per

> BE 12/01/28

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Page 6

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

dwg D2750

12-Deburr holes

8/12/01/20

170

QC10- Inspect visual per QSI004- ground welds

0.00

170

QC

Memo

0.00

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00

180

QC

Memo

0.00

Quality Control

8.26.11/30

W/O:		WORK ORDER CHANGES					
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Page 7

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190 Pressure Wash per QSI005 4.3

0.00

190

HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

1 12-1-30

200

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

200

Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

8-40
320 OF
9-10

1X M-12/01/31

210

QC3- Inspect Part Finish

0.00

210

QC

Quality Control

Memo

✓ Inspect for foreign object per QSI 024

0.00

1 RH d M 12/01/31

M119480

W/O:		WORK ORDER CHANGES					
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Page 8

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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp	
230	HandFinishing	0.00								
230	HandFinish	0.00								
Hand Finishing	<div>Memo</div> <div>1-Install inserts as per dwg D2750</div> <div>2-Inspect for Foreign Objects</div> <div>3-Spray inside of tube with "LPS-3" batch: <u>111A</u></div> <div>4-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750 SIKA FLEX 241 BATCH: <u>11119508</u> EXP DATE: <u>12/09</u></div> <div>5-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: <u>11110348</u></div> <div>6-Coat all exposed fasteners with "LPS Procyon" batch: <u>11114596</u></div>						<u>12/1</u>	<u>6</u>	<u>111102/07</u>	

12H f 11/02/02

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Page 9

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N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

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Start Date: 09/01/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

240

QC5- Inspect part completeness to step on W/O

0.00

240

QC

Memo

0.00

Quality Control

250

Pick Kit

0.00

250

Packaging

Memo

0.00

Packaging

260

QC4- 100% Inspect kits for completeness

0.00

260

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Page 10

January-09-12 9:00:06 AM

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Item Name: Skidtube RH

Start Date: 09/01/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 23/01/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

0.00

270

Packaging

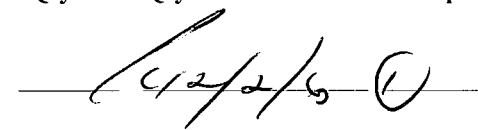
Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-012



280

0.00

280

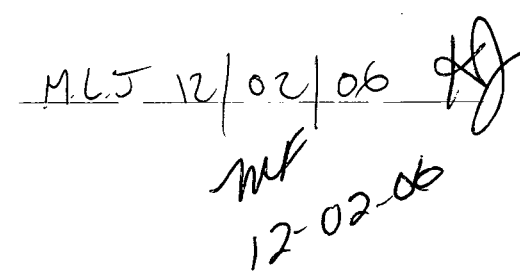
QC21- Final Inspection - Work Order Release

QC

Memo

0.00

Quality Control



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Picklist Print

January-09-12 9:00:10 AM

Page 1

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78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev: I02.09.25 Rearranged procedure steps KJ
 IPP Rev: J 06-03-29 As per Rev D EC
 IPP Rev: K 06-07-13 As per dsi9343 EC
 IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
 IPP Rev: M 08-04-22 update steps 4, 13 DD verified by: EC
 IPP Rev: N 08-09-23 rev F as per dwg DD verified by: ec IPP Rev: O
 10.06.22 revise seq 110 DD verf: EC IPP Rev: P 10.10.01 as
 per IIN rev H DD verf: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2600-3-BENT

Manufactured

No

110

Each

18.0000

1

1

D2600-3-BENT

**

Extrusion Bent

Location

Loc Qty

Loc Code

LG

18

66875

7

73253

1

75021

1

75022

1

75023

1

77623

7

D2744

Manufactured

No

110

Each

33.0000

1

1

D2744

**

Cap

Location

Loc Qty

Loc Code

LG002

33

62715

1

70881

12

71861

20

① JW 12-1-9

BEQ-01-16

W/O:		WORK ORDER CHANGES					
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Page 2

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D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2739

Manufactured No

160 Each

1.0000 1 1

D2739

350 I Beam

**

DE 12/61/20

Location 78420

Loc Qty

Loc Code

LG

1

72155

1

D2743

Manufactured No

160 Each

153.0000 8 8

D2743

Crossbolt Spacer

**

BER-01-23

Location

Loc Qty

Loc Code

LG001

153

67766

4

68251

3

73403

64

74445

82

8

D3490-3

Manufactured No

160 Each

54.0000 4 4

D3490-3

Cross Bolt Spacer

**

BER-01-23

Location

Loc Qty

Loc Code

LG001

54

74877

14

77567

40

4

D3490-1

Manufactured No

160 Each

62.0000 4 4

D3490-1

Cross Bolt Spacer

**

BER-01-23

Location

Loc Qty

Loc Code

LG001

62

62450

2

74875

20

77042

40

4

January-09-12 9:00:10 AM

Shop Packet Print

Page 2

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D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3631-1

Manufactured No

230 Each

343.0000 8 8

D3631-1

Washer

**

JL 12/6/31

LocationLoc QtyLoc Code

ST072

343

68062

2

75548

341

X8

D3791-1

Manufactured No

230 Each

20.0000 1 1

D3791-1

Wearplate

**

JL 12/6/31

LocationLoc QtyLoc Code

FP002

20

62239

2

74598

2

75041

16

V1

D3793-3

Manufactured No

230 Each

13.0000 1 1

D3793-3

Wearshoe

**

JL 12/6/31

LocationLoc QtyLoc Code

FP001

13

74528

1

75043

12

V1

January-09-12 9:00:10 AM

Shop Packet Print

Page 3

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Page 4

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D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

MS21043-6

Purchased

No

230

Each

373.0000

4

4

MS21043-6

NUT

**

12/01/31

Location

Loc Qty

Loc Code

FG

20

103693

20

ST301

353

112314

143

117887

10

118384

200

x4

D3794-1

Manufactured

No

230

Each

30.0000

1

1

D3794-1

Gasket

**

12/01/31

Location

Loc Qty

Loc Code

FP002

30

74594

2

75042

28

x1

NAS1611-010

Purchased

No

230

Each

179.0000

8

8

NAS1611-010

O-RING

**

12/01/31 (18) 12/01/31

Location

Loc Qty

Loc Code

FP

100

110915

0

120121

100

FP001

79

110915

14

117460

8

118077

1

118612

3

119438

47

119623

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:10 AM

Page 5

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2741

Manufactured No

250 Each

16.0000 1 1

D2741

Blade, 350 Skidtube

**

[Handwritten signature]

Location

Loc Qty

Loc Code

ST -10

ST466 26

71856 16

NAS1515H3L

Purchased No

230 Each

179.0000 4 4

***NAS1515H3L ***

WASHER

**

71856

12/01/31

Location

Loc Qty

Loc Code

FG 40

102472 40

ST277 139

118686 3

119438 36

120072 100

NAS1611-013

Purchased No

230 Each

196.0000 8 8

NAS1611-013

O-RING

**

12/01/31

Location

Loc Qty

Loc Code

FP 100

117291 0

120121 100

FP001 96

116582 5

117291 2

117887 53

119623 36

x8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:10 AM

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

206.0000

4

4

AN3C6A

BOLT

**

Handwritten: 12/01/31

Location

Loc Qty

Loc Code

FP001

1

111982

1

ST351

205

111982

2

116419

23

116549

2

116704

12

117619

10

117688

1

117872

5

118422

13

119449

100

119749

37

Handwritten: X4

NAS1149C0832R

Purchased

No

230

Each

319.0000

1

1

NAS1149C0832R

WASHER

**

Handwritten: 12/01/31

Location

Loc Qty

Loc Code

ST297

319

114915

319

Handwritten: X1

D3536-25

Manufactured

No

230

Each

17.0000

1

1

D3536-25

Gasket

**

Handwritten: 12/01/31

Location

Loc Qty

Loc Code

FP002

17

75039

17

Handwritten: X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

January-09-12 9:00:10 AM

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3794-3

Manufactured No

230

Each

12.0000

1

1

D3794-3

Gasket

**

M 12/01/31

LocationLoc QtyLoc Code

FP002

12

74530

2

74596

10

x1

AN3C5A

Purchased No

230

Each

860.0000

34

34

AN3C5A

Bolt

**

M 12/01/31

LocationLoc QtyLoc Code

FP001

7

115835

7

ST350

853

116419

28

117343

17

117764

49

117872

2

119127

500

119749

257

x34

D3537-1

Manufactured No

230

Each

24.0000

3

3

D3537-1

Wearpad

**

B77560 (x3) M 12/01/31

LocationLoc QtyLoc Code

FP002

24

69817

5

77036

19

January-09-12 9:00:10 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:10 AM

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230 Each

15.0000 1 1

D3535-25

Wearshoe

**

M 12/01/31

Location

Loc Qty

Loc Code

FP001

15

62233

1

74592

2

75040

12

D3492-3

Manufactured No

230 Each

21.0000 8 8

D3492-3

Plug

**

M 12/01/31

Location

Loc Qty

Loc Code

FP002

21

74447

9

74871

12

1377039

X2

X5

AN960C10L

NAS1149C0332
R

Purchased No

230 Each

0.0000 38 38

***AN960C10L ***

washer

**

11119736 (x38) M 12/01/31

D3488-042

Manufactured No

230 Each

13.0000 1 1

D3488-042

Blade Fitting Assembly, RH

**

1377015 (x1) M 12/01/31

Location

Loc Qty

Loc Code

FP002

13

62003

1

69904

1

71883

1

75068

10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 9

January-09-12 9:00:10 AM

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-225

Purchased

No

230

Each

1,094.000

38

38

ALS4-1032-225******

u 12/6/13

Insert

LocationLoc QtyLoc Code

ST281

1094

108696

199

110768

62

118386

765

118966

68

x38

D3492-1

Manufactured

No

230

Each

110.0000

8

8

D3492-1******

u 12/01/13

Plug

LocationLoc QtyLoc Code

FP002

110

69531

8

74444

2

76235

100

x8

D3793-1

Manufactured

No

230

Each

9.0000

1

1

D3793-1******

B77029 (x1) u 12/01/13

Wearshoe

LocationLoc QtyLoc Code

FP001

9

75038

9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:10 AM

Page 10

Work Order ID: 78412

Parent Item: D350-636-012

Parent Item Name: Skidtube RH

78412

D350-636-012

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C35A

Purchased

No

230

Each

80.0000

1

1

AN8C35A

BOLT

**

del 12/01/31

Location

Loc Qty

Loc Code

FP002

79

115960

1

117834

22

118286

56

ST346

1

114442

0

115188

0

115960

1

XL

MS21083C8

Purchased

No

230

Each

89.0000

1

1

MS21083C8

NUT

**

del 12/01/31

Location

Loc Qty

Loc Code

FP002

1

115884

1

ST303

38

115884

0

118077

1

118614

6

119309

2

119436

25

119638

4

ST304

50

120142

50

XL

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 11

January-09-12 9:00:11 AM

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

D2745

Manufactured No

230

Each

81.0000

8

8

D2745

Bushing

**

12/6/13

Location

Loc Qty

Loc Code

FP001

81

69529

1

76142

80

AN6C44A

Purchased

No

230

Each

76.0000

4

4

AN6C44A

BOLT

**

12/6/13

Location

Loc Qty

Loc Code

FG

2

103964

2

ST343

74

119125

29

120095

20

120143

25

D3532-1

Manufactured

No

250

Each

20.0000

2

2

D3532-1

Spacer

**

12/4/12

Location

Loc Qty

Loc Code

ST065

20

74880

20

74880

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:11 AM

Page 12

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

250

Each

89.0000

2

2

MS21083C8

NUT

**

Location

Loc Qty

Loc Code

FP002

1

115884

1

ST303

38

115884

0

118077

1

118614

6

119309

2

119436

25

119638

4

ST304

50

120142

50

NAS1149D0863J

Purchased

No

250

Each

159.0000

2

2

NAS1149D0863J

WASHER

**

Location

Loc Qty

Loc Code

ST298

159

118078

59

119307

100

D3493-1

Manufactured

No

250

Each

15.0000

2

2

D3493-1

Washer

**

Location

Loc Qty

Loc Code

ST062

15

70697

2

76237

13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-09-12 9:00:11 AM

Work Order ID: 78412

78412

Parent Item: D350-636-012

D350-636-012

Parent Item Name: Skidtube RH

Start Date: 09/01/2012

Required Date: 23/01/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

250

Each

79.0000

2

2

AN8C21A

BOLT

**

119530 C14/2

Location

Loc Qty

Loc Code

ST343

79

118758

5

119530

24

120094

50

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

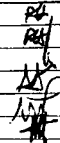
QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

SHOOT
RETURN
ENGINEER
UNCONTROLLED
SUBJECT TO A
WITH
WORK
NO. 78412 M.C.J
12/01/09

RELEASED

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES (Ø0.297) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

F	INCORPORATE DSI 9413: QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/-3 REPLACES D3535-13/-35 (ZN C8-1); D3794-1/-3 REPLACES D3536-13/-35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS, ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741; QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.07.16	DRAWING NO. D2750	
		REV. F SHEET 1 OF 1	
		TITLE 350 SKIDTUBE ASSEMBLY	
		SCALE NTS	
COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

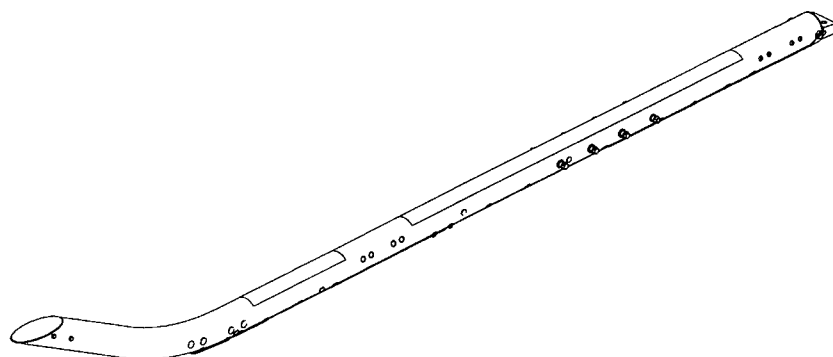
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

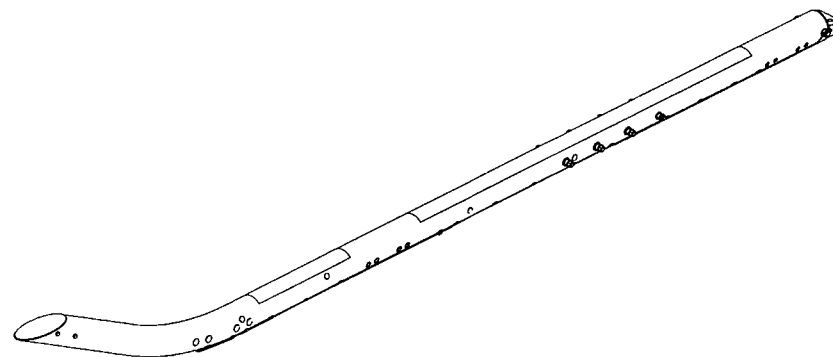
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78412



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

RELEASED
08-09-22

DESIGN	PC	DART AEROSPACE USA, INC.	
DRAWN	AM	PORT HADLOCK, WA	
CHECKED	SA	DRAWING NO.	REV. F
MFG. APPR.	SA	D2750	SHEET 2 OF 11
APPROVED	ME	TITLE	SCALE
DE APPR.	ME	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMBINED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

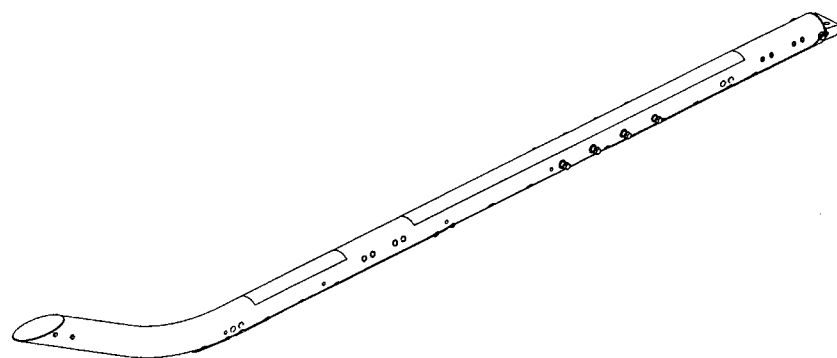
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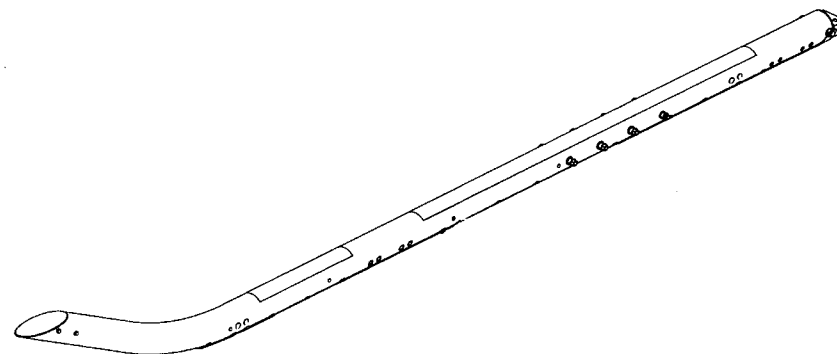
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78412



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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64-9 221.47

DESIGN	PD	DART AEROSPACE USA, INC.	
DRAWN	PD	PORT HADLOCK, VA	
CHECKED	MA	DRAWING NO.	REV. F
MFG. APPR.	MA	D2750	SHEET 3 OF 11
APPROVED	MA	TITLE	SCALE
DE APPR.	MA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.</small> <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

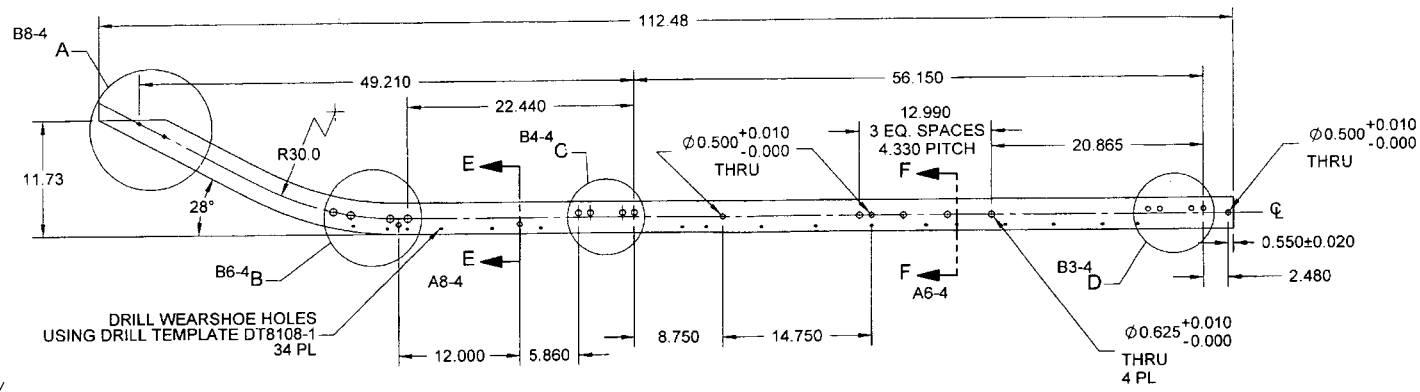
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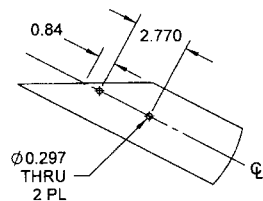
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

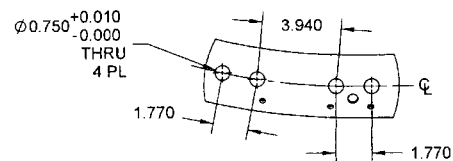
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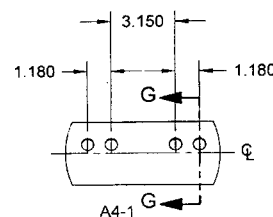
D2750-1 LH SKIDTUBE



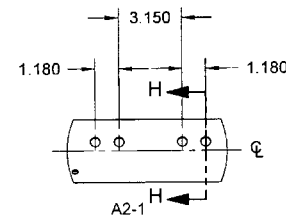
DETAIL A
SCALE 2X



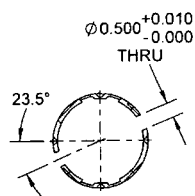
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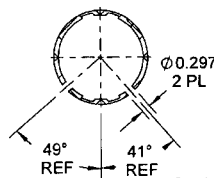
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SCALE 2X



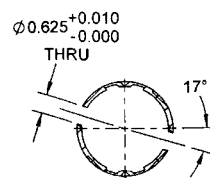
DETAIL D
SCALE 2X



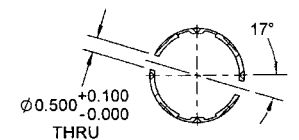
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

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DESIGN	IPB	DART AEROSPACE USA, INC.	
DRAWN	RB	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 4 OF 11
APPROVED		TITLE	SCALE
DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

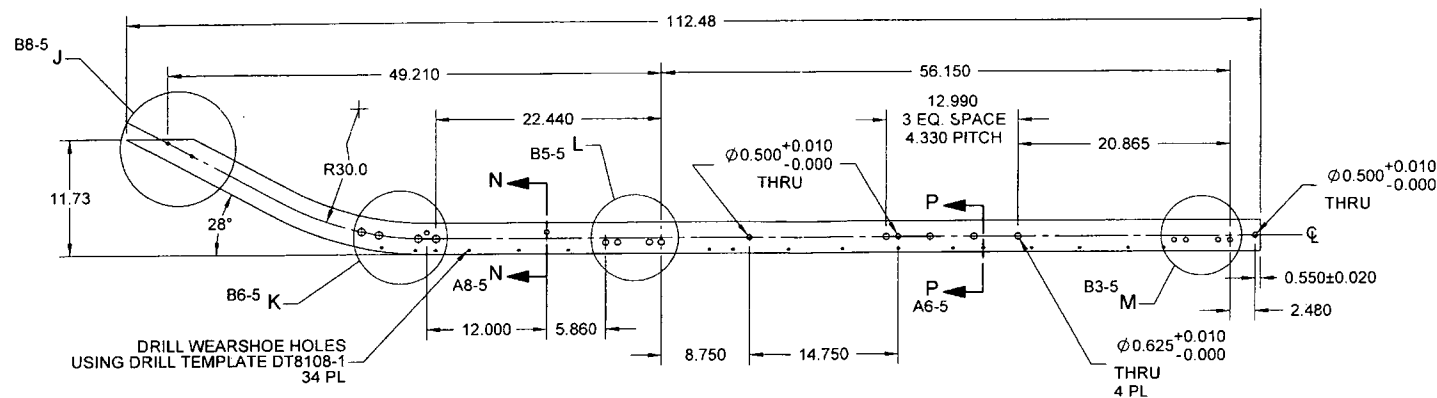
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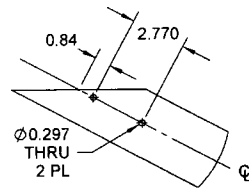
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

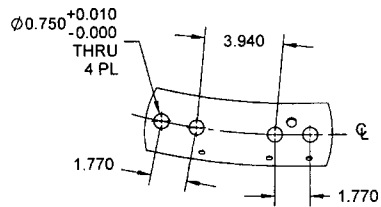
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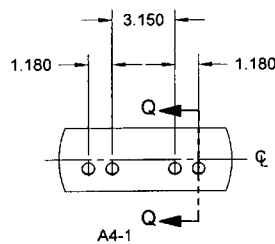
D2750-2 RH SKIDTUBE



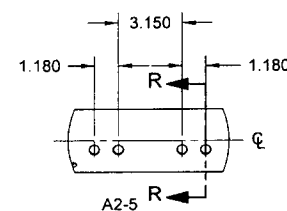
DETAIL J
SCALE 2X



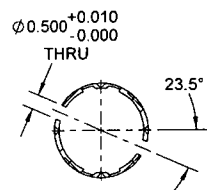
DETAIL K
SCALE 2X



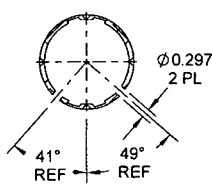
DETAIL L
SCALE 2X



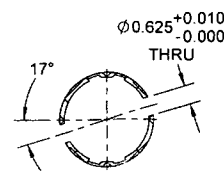
DETAIL M
SCALE 2X



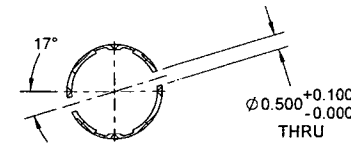
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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DESIGN	REV	DART AEROSPACE USA, INC.	
DRAWN	REV	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

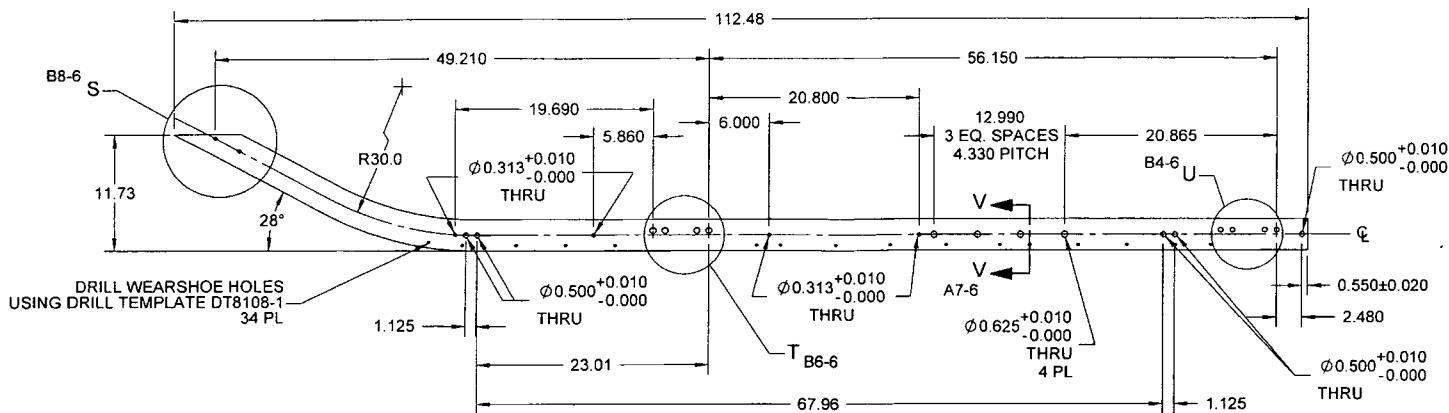
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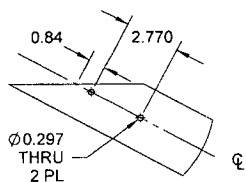
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

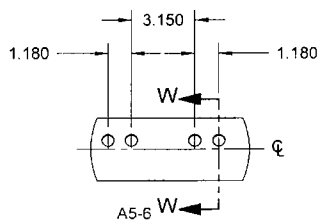
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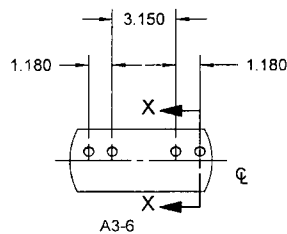
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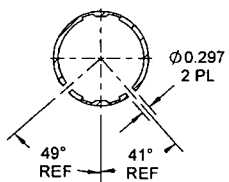
DETAIL S
D8-6
SCALE 2X



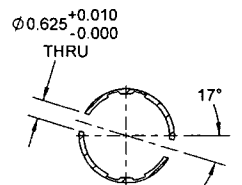
DETAIL T
C5-6
SCALE 2X



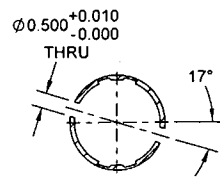
DETAIL U
D3-6
SCALE 2X



SECTION V-V
C4-6
SCALE 3X, 17 PL



SECTION W-W
B6-6
SCALE 3X, 4 PL



SECTION X-X
B4-6
SCALE 3X, 4 PL

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68 JAN 12 1968

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 6 OF 11
APPROVED		TITLE	SCALE
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

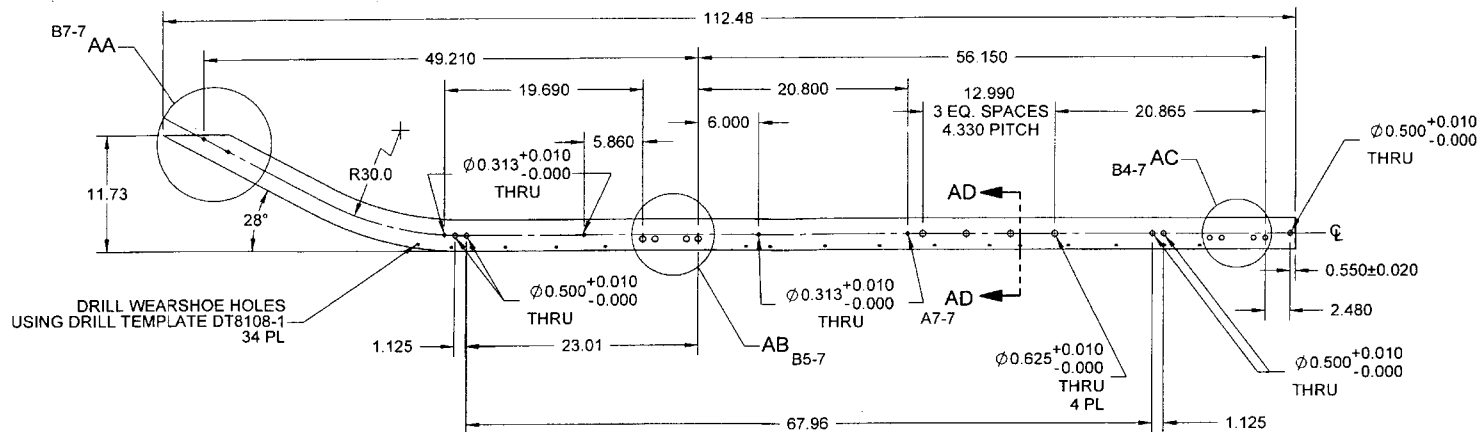
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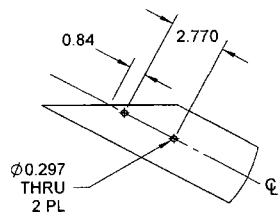
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

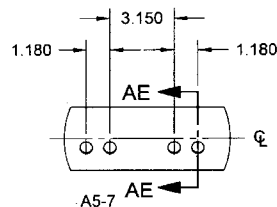
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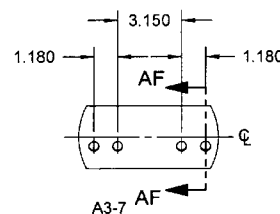
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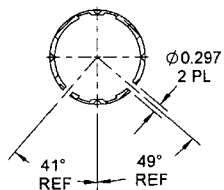
DETAIL AA
SCALE 2X



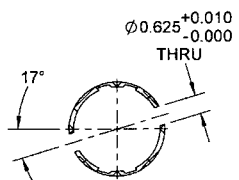
DETAIL AB
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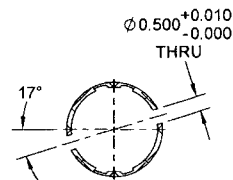
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

RELEASED

DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 7 OF 11
APPROVED		TITLE	SCALE
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

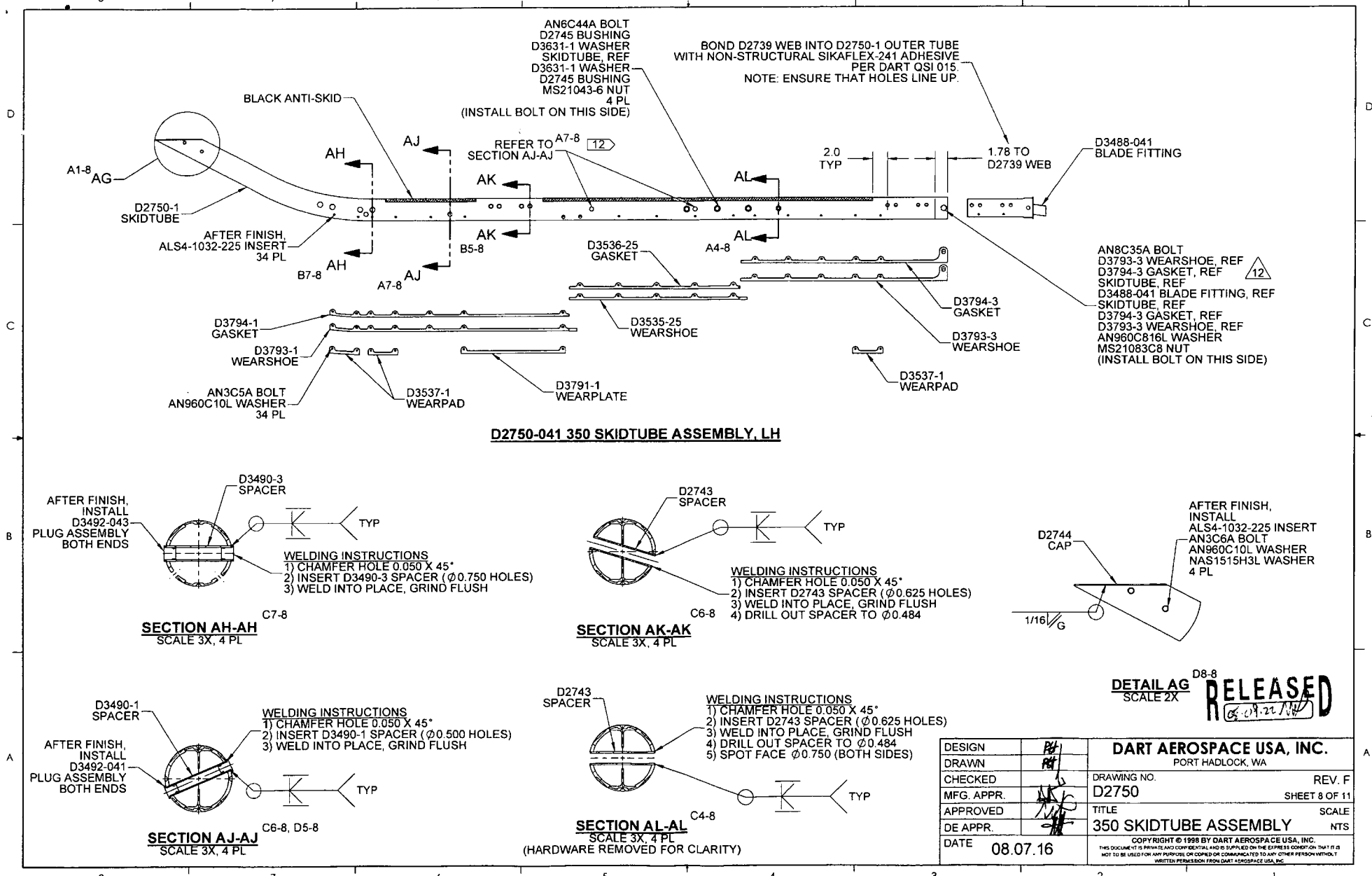
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78412



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

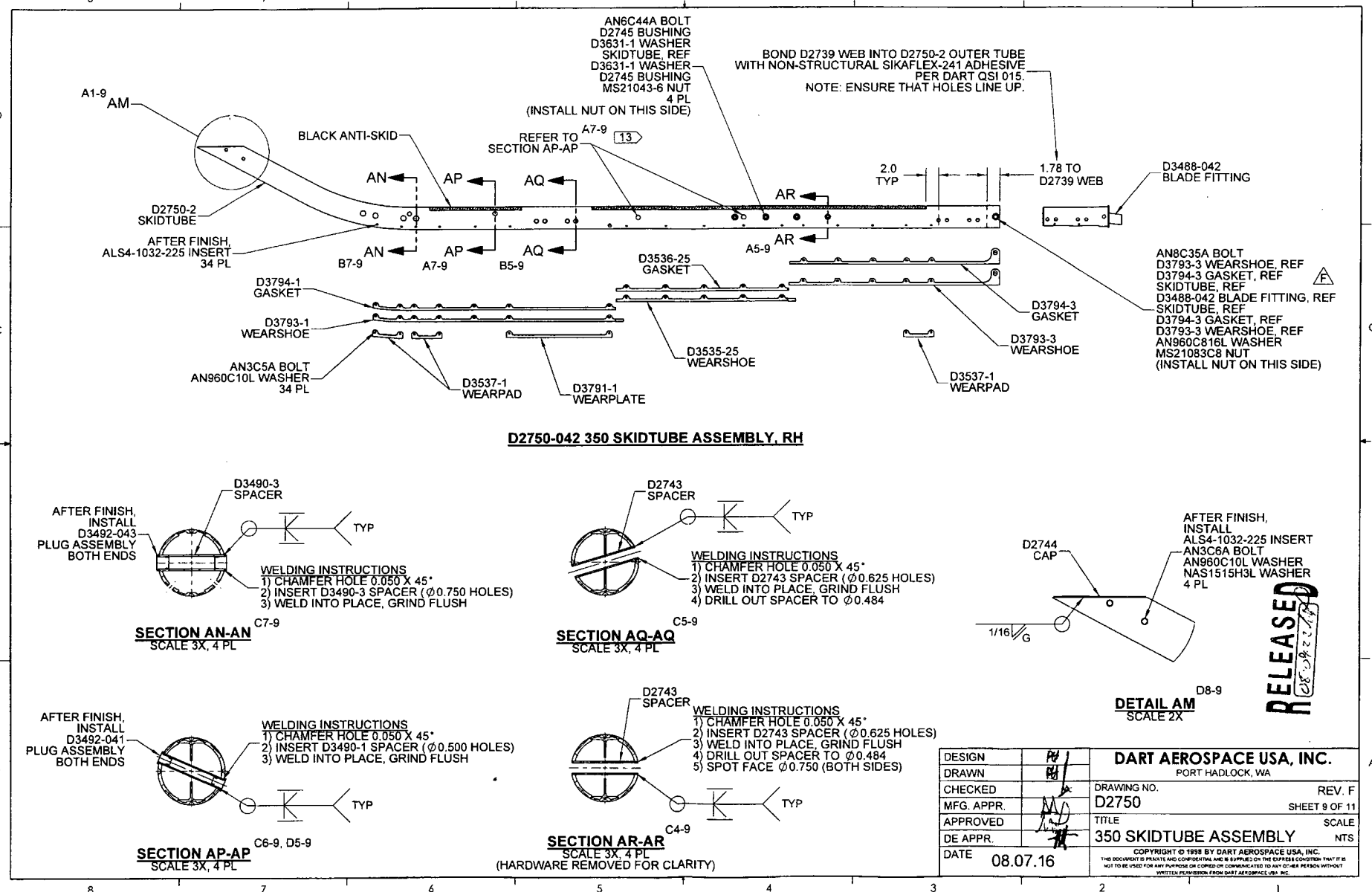
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78412



DESIGN	PH	DART AEROSPACE USA, INC.
DRAWN	PH	PORT HADLOCK, WA
CHECKED		DRAWING NO. D2750
MFG. APPR.		REV. F
APPROVED		TITLE 350 SKIDTUBE ASSEMBLY
DE APPR.		SCALE NTS
DATE	08.07.16	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

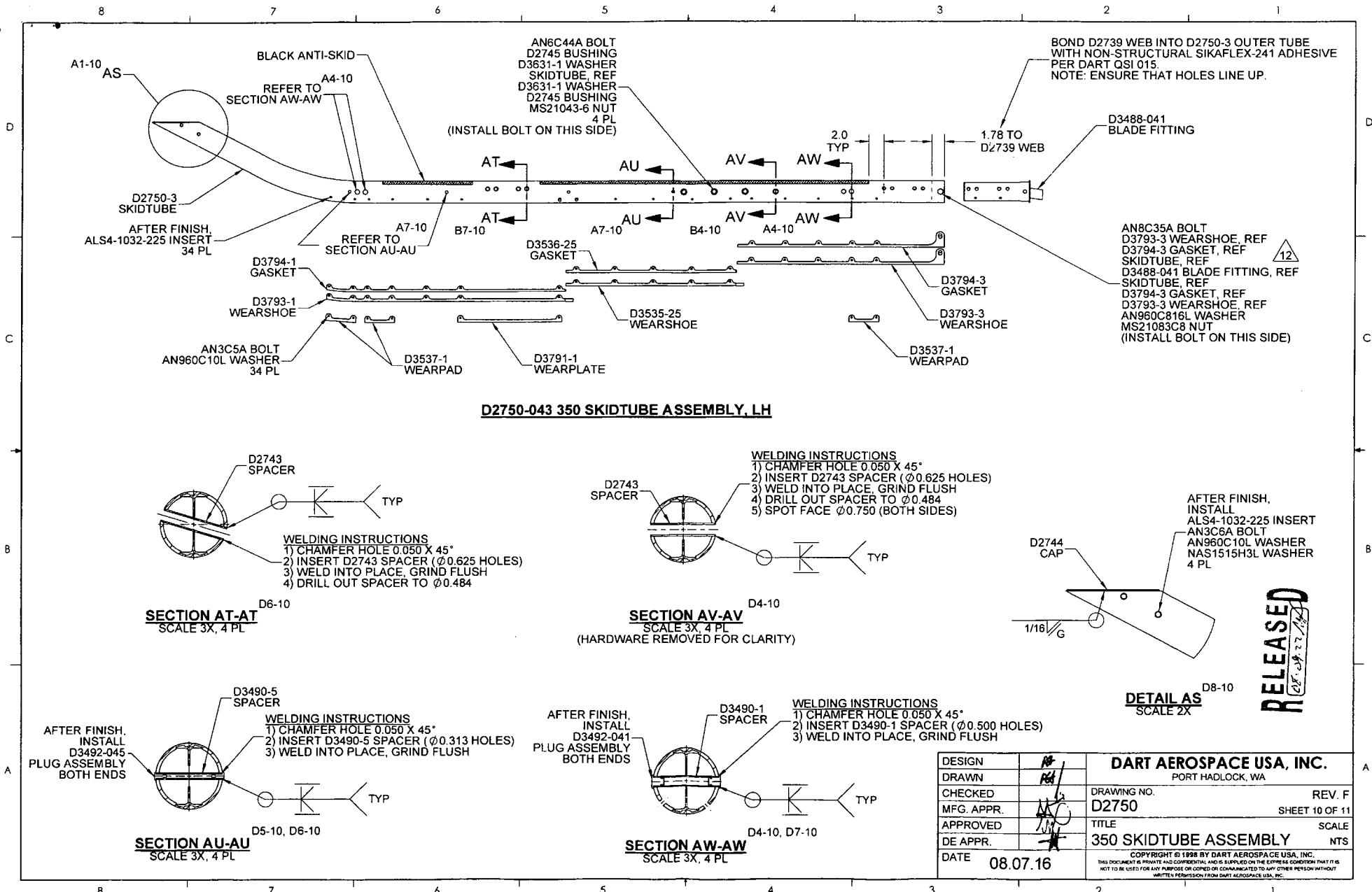
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

70412



DESIGN	<i>MS</i>	DART AEROSPACE USA, INC.	
DRAWN	<i>MS</i>	PORT HADLOCK, WA	
CHECKED	<i>MS</i>	DRAWING NO.	REV. F
MFG. APPR.	<i>MS</i>	D2750	SHEET 10 OF 11
APPROVED	<i>MS</i>	TITLE	SCALE
DE APPR.	<i>MS</i>	350 SKIDTUBE ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
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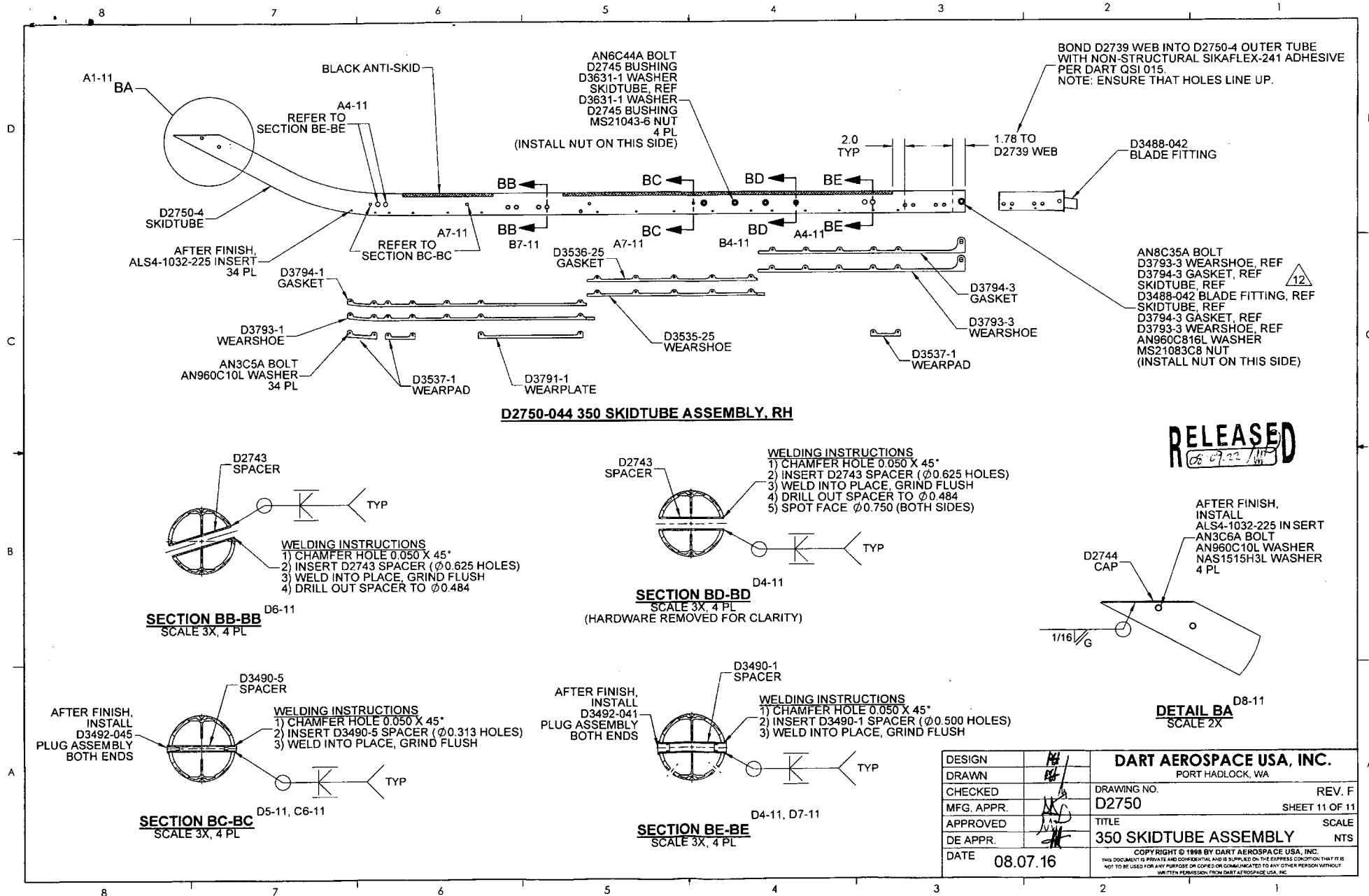
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

78412



Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description ~ Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 279

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 77362
Part number: D 350 636 012
Description: 350 skidsteer
Welding Process: Tig ☒ Mig ☐
Base material: aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Pat Furr Date of Test Coupon 11.12.22

Welder Barclay Elliott Date of Test Coupon 11.12.22

The above named individual is qualified in accordance with AWS D17.1.2001 to weld